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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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12/27/2001

Michael L. Heubel

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02/09/2005

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EXAMINER

GRIER, LAURA A

ART UNIT

PAPER NUMBER

2644

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/032,918	HEUBEL ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Laura A Grier	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 9/20/04.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4,6,7 and 9-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,7 and 9-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner. .  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6-7, 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota, JP11077606 in view of Konstantinou, U. S. Patent No. 6584201.

Regarding claims 1 and 11, respectively, Kubota discloses a receiver (figure 1 and 5 and paragraph 0031) comprising a microphone (26) for detecting a ring tone of a telephone, a chime of an interphone, etc., which reads on an audio signal detector for remotely receiving an audible ring signal transmitted via an acoustic medium; a processing judgment section (36), which indicates a processing in communication with the detector; Kubota further discloses a memory (43m) coupled with a logic judgment section (44), wherein the memory stores reference data for the ring tone of a telephone, a chime of the an interphone detected by the microphone, wherein the predetermined digitized data is obviously disclosed as evident by the fact that the data is stored in memory, which indicates comparing the received audio ring signal with one or more predetermined audio ring signals and is pre-stored in a memory/storage device with the processor, and based on the compared results, the volume of the receiver is reduced, which

constitutes generating a mute signal, therein. However, Kubota fails to disclose the audible ring signal being converted to a digitized signal.

Regarding the audible ring signal being converted to a digitized signal, in a similar field, Konstantinou et al. (herein, Konstantinou) discloses an analog-to-digital converter (62/64), for converting an analog sound signal into a digital signal (figure 1, col. 5, lines 1-5).

Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Kubota by implement an A/D converter for converting the audible ring signal to an digitized ring signal, for adequate processing or comparing of the detect signal in the processing section of the receiver.

Regarding claim 2, Kubota and Konstantinou discloses everything claimed as applied (see claim 1). Kubota further discloses a microphone (26).

Regarding claim 3, Kubota and Konstantinou discloses everything claimed as applied (see claim 1). Further, Konstantinou discloses an amplifier (14/16). Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Kubota by implementing an amplifier for the purpose of amplifying the signal detected by the microphone (col. 3, lines 50-58).

Regarding claim 4, Kubota and Konstantinou discloses everything claimed as applied (see claim 1). Further, further Konstantinou discloses an analog-to-digital converter (62/64) coupled the output of a microphone for converting an analog sound signal into a digital signal (figure 1, col. 5, lines 1-5).

Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Kubota by implement an A/D converter for

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converting the audible ring signal to an digitized ring signal, for adequate processing or comparing of the detect signal in the processing section of the receiver.

Regarding claims 6 and 10, respectively, Kubota discloses a receiver (figure 1 and 5 and paragraph 0031) comprising a microphone (26) for detecting a ring tone of a telephone, a chime of an interphone, etc., which reads on means for detecting an audible ring signal transmitted via an acoustic medium; Kubota further discloses a memory (43m) coupled with a logic judgment section (44), wherein the memory stores reference data for the ring tone of a telephone, a chime of the an interphone detected by the microphone, wherein the predetermined digitized data is obviously disclosed as evident by the fact that the data is stored in memory, which indicates means for presorting and comparing the received audio ring signal with one or more predetermined audio ring signals, and based on the compared results, the volume of the receiver is reduced, which constitutes generating a mute signal, therein. However, Kubota fails to disclose the audible ring signal being converted to a digitized signal.

Regarding the audible ring signal being converted to a digitized signal, in a similar field, Konstantinou discloses an analog-to-digital converter (62/64), for converting an analog sound signal into a digital signal (figure 1, col. 5, lines 1-5).

Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Kubota by implement an A/D converter for converting the audible ring signal to an digitized ring signal, for adequate processing or comparing of the detect signal in the processing section of the receiver.

Regarding claim 7, Kubota and Konstantinou discloses everything claimed as applied (see claim 6). Konstantinou further discloses an amplifier (14/16). Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Kubota by implementing an amplifier for the purpose of amplifying the signal detected by the microphone (col. 3, lines 50-58).

Regarding claim 7, Kubota and Konstantinou discloses everything claimed as applied (see claim 11). Kubota further discloses a receiver set (1) - (television).

Regarding claim 9, Kubota discloses a receiver (figure 1 and 5 and paragraph 0031) comprising a microphone (26) for detecting a ring tone of a telephone, a chime of an interphone, etc., which reads on a transducer remotely receiving an audible ring signal transmitted via an acoustic medium; a processing judgment section (36) which includes a memory (43m) coupled with a logic judgment section (44), wherein the memory stores reference data for the ring tone of a telephone, a chime of the an interphone detected by the microphone, wherein the predetermined digitized data is obviously disclosed as evident by the fact that the data is stored in memory, which indicates comparing the received audio ring signal with one or more predetermined audio ring signals and is pre-stored in a memory/storage device with the processor, and based on the compared results, the volume of the receiver is reduced, which constitutes generating a mute signal, therein. However, Kubota fails to disclose an amplifier connected the transducer, an analog-to-digital signal converter, and digital signal processor.

Regarding the amplifier, an A/D converter, and a digital signal processor, in a similar field, Konstantinou discloses an amplifier (14/16) coupled to the output of the transducer for

amplifying a signal, an analog-to-digital converter (62/64), for converting an analog sound signal into a digital signal (figure 1, col. 5, lines 1-5), and microprocessor, which obviously constitutes as a digital signal processor as evident by the fact that it processes the digital signals output by the A/D converters.

Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Kubota by implement an amplifier (amplifying the microphone output), an A/D converter (converting the acoustic/analog signal to a digital signal), and a digital signal processor (digital processing of digital signal) for the purpose of adequately processing the detected signal to enable efficient sound control.

3. Claims 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota and Konstantinou in view of Lafay et al., U. S. Patent No. 6476878.

Regarding claim 13, Kubota and Konstantinou disclose everything claimed as applied above (see claim 11). However, Kubota and Konstantinou fail to specifically disclose a muting on/off switch.

Regarding the muting on/off switch, Lafay et al. (herein, Lafay) discloses a mute switch (51) for a television system (figure 4 and col. 4, lines 49-58, col. 5, lines 41-49), which indicates a mute on/off switch.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Kubota and Konstantinou by implementing a mute switch for the purpose eliminating unwanted anomalies or interferences for a particular device that are generated from other audio devices used within same area.

4. Claim 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota and Konstantinou in view of Chuang, U. S. Patent No. 5777571.

Regarding claim 14, Kubota and Konstantinou disclose everything claimed as applied above (see claim 11). However, Kubota and Konstantinou fail to specifically disclose a training mode on/off switch.

Regarding the training mode switch, Chuang discloses a training control switch (331 – col. 4, lines 17-36), which indicates a training mode on/off switch.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Kubota and Konstantinou by implementing a training mode switch for the purpose properly storing sound data or audible ring data that can later be used for compability purposes with a current input signal so particular sound can be recognized automatically by a particular audio device.

#### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-4, 6-7, and 9-14 have been considered but are moot in view of the new ground(s) of rejection.

The applicant essentially argue that previous reference of prior art failed to disclose the audio signal detector for remotely receiving an *audible ring signal transmitted via an acoustic medium; converting the received audible ring signal into a digitized ring signal; comparing the digitized signal with one or more predetermined digitized audio ring signals...* as amended.

Thus, new grounds of rejections were set forth with the amended changes, and new references of



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prior art have been provide in a new rejection which teaches muting and/or reducing the volume of an audio device upon an audible detection of an ring signal by using a microphone to detect audible ring signals, a processing means for comparing the detect signals with predetermined reference data, which are stored in a memory, and an analog-to-digital convert for digitized the acoustic analog signal for adequate processing, therein.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (703) 306-4819. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh N Tran can be reached on (703) 305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Laura A. Grier  
February 7, 2005